



MoDeV²a 2006: Perspectives on Integrating MDA and V&V



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Abstract MDA and its related approaches (DSL, MDE, . . .) primarily revolve around manual refinement and automated transformation of models. This approach is successful at quickly generating results. However, it is difficult to gauge the quality of those results. Is the result of a transformation really what the user intended? Does the computed result of a transformation really conform with its specified result? Such questions about intended and specified behaviour usually delineate the domain of Validation and Verification (V&V). V&V is an established area of research, and a transfer of ideas between V&V and MDA might help to improve quality and reliability of MDA and induce a new conceptual way of thinking in established V&V. The emergence of model-based testing can be seen as a first result of such a transfer. However, we believe important challenges in model-based testing still remain. Moreover, it is crucial to go beyond model-based testing and take a truly model-driven-development approach to V&V to reap even greater benefits.

Topics We invite work related to the following topics:

- Integrate model-based testing in the development process: experience reports, empirical evidence, life-cycle of test models.
- The application of 'traditional' V&V to MDA: e.g. Using tools like model-checkers and the corresponding semantic formalisms to analyse the behaviour of models produced in MDA tool chains.
- The integration of testing tools and MDA tools: e.g. automated regression testing of MDA tool chains.
- The application of V&V to model transformations: e.g. formalizing and testing transformation behaviour with V&V tools and languages; formalizing traceability and impact analysis of elements through a transformation chain (e.g. test case generation).
- The application of 'novel' V&V to MDA: e.g. creating models of specifications and requirements on MDA transformations and then using MDA to check them and ensure traceability from the requirements of the system.
- V&V due to the evolution of models on any level: e.g. formalising and testing changes (state transition semantics) within a (meta-)model, including propagation to dependent levels and model merge.
- The extension of UML in a tool-independent way to allow V&V: e.g. identifying which components of the UML standard are useful for V&V (e.g. statecharts, sequence diagrams), and proposing extensions to their syntax and/or semantics where their deficiencies hinder V&V.

Workshop Format The workshop will be using the 1,2,3!-Format, giving space to present 12 papers grouped into four 90 minute sessions. The sessions will be grouped by topic, possibly along the areas of interest outlined above. Each session will be headed by a panel comprised of the three presenters. In this format, each of the three presenters has a fifteen minute block to present the main idea of their paper. Afterwards, the presenters stay up as panellists. To prepare for the subsequent discussion, papers will be pre-distributed to all participants by email. The discussion should be between the audience and the panel.

Paper Format and Publication Submissions should be in the form of short papers, not exceeding fifteen pages, describing complete work or work in progress. Authors should use the [Springer LNCS style and procedure](#). All papers will be published in a citeable volume of CEA. Best papers will be published in a special issue of SoSyM, the Journal on Software and Systems Modelling. In addition, the two best MoDeV²a papers will be published in a [LNCS MoDELS Satellite Events volume, as done in 2005](#).